

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) Device for digital pulse width modulation with:
  - (a) a filter device for filtering a filter input signal;
  - (b) a quantization device for quantizing a filter output signal of the filter device;
  - (c) a PWM mapper device for generating a digital PWM signal from an output signal of the quantization device; and
  - (d) a feedback loop for feeding back the digital PWM signal to a loop input signal and for generating the filter input signal by subtraction; and
  - (e) wherein a different sampling rate is provided at the filter device than the sampling rate of the quantization device.
2. (Previously Presented) Device according to Claim 1, wherein an interpolation device, in particular an interpolation filter, is provided for generating the loop input signal from an input signal. ✎
3. (Previously Presented) Device according to Claim 1, wherein a post-filter device is provided for filtering the PWM signal.
4. (Canceled)
5. (Previously Presented) Device according to Claim 1, wherein a pulse frequency of the PWM signal corresponds to the sampling frequency of the quantization device and is smaller by a factor of  $2^N$  than the sampling frequency of the filter device, N corresponding to the number of bits of the quantization device.

6. (Previously Presented) Device according to Claim 1, wherein the PWM signal has a constant pulse frequency.
7. (Previously Presented) Device according to Claim 1, wherein amplitude values of the output signal of the quantization device can be converted into pulse widths of the PWM signal in the PWM mapper device.
8. (Previously Presented) Device according to Claim 1, wherein two at least similar feedback loops which are connected to each other on the output side via a load are provided, loop input signals that are inverse in relation to each other being provided on the two loops for generating a differential PWM signal at the load.
9. (Previously Presented) Device according to Claim 1, wherein a loop filter of the 4th order with a resolution of the quantization device of 4 bits is provided as the filter device.
10. (Previously Presented) Device according to Claim 1, wherein, for stabilization in the case of overloading, limiting devices are provided in the filter device for limiting output values of integrators.
11. (Currently Amended) Device for digital pulse width modulation with:
  - (a) a filter device for filtering a filter input signal in a first feedback loop;
  - (b) a quantization device for quantizing a loop signal;
  - (c) a PWM mapper device for generating a digital PWM signal from an output signal of the quantization device; and
  - (d) a second feedback loop for feeding back the digital PWM signal to a loop signal while generating the filter input signal by subtraction, it being

possible for the loop signal to be generated from a loop input signal and a filter output signal by addition; and

(e) wherein a different sampling rate is provided at the filter device than the sampling rate of the quantization device.

12. (Previously Presented) Device according to Claim 1, wherein an amplifier device and/or filter device is provided downstream of the PWM mapper for amplification and/or filtering of the digital PWM signal and is connected to a voltage supply which is likewise connected to an A/D converter, the output signal of which is connected to a multiplier in the control loop.
13. (Currently Amended) Method for digital pulse width modulation with the steps of:
  - (a) filtering a filter input signal in a filter device having a first sampling rate;
  - (b) quantizing a filter output signal of the filter device in a quantization device having a second sampling rate being different from the first sampling rate;
  - (c) generating a digital PWM signal from the output signal of the quantization device in a PWM mapper device; and
  - (d) feeding back the digital PWM signal to a loop input signal and generating the filter input signal in a feedback loop.
14. (Previously Presented) Method according to Claim 13, wherein a bandpass pulse width modulation is performed.
15. (Previously Presented) Method according to Claim 13, wherein an amplifier device and/or filter device is provided downstream of the PWM mapper for amplification and/or filtering of the digital PWM signal and is connected to a voltage supply which is likewise connected to an A/D converter, the output

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signal of which is connected to a multiplier in the control loop, the operating voltage signal being digitized in the A/D converter and coupled into the control loop.